

REMARKS

The Office Action dated April 9, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-14 are currently pending in the application. Claims 1 and 8 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 2, 9, and 11-14 have been previously withdrawn from consideration by the Examiner. No new matter has been added. Therefore, claims 1, 3-8, and 10 are respectfully submitted for consideration.

Claim Rejections Under 35 U.S.C. § 103(a)

The Office Action rejected claims 1, 3-8, and 10 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Atsushi (Japanese Patent No. JP8197595) (“Atsushi”) in view of Haydon, et al. (U.S. Patent No. 4,274,026) (“Haydon”). The Office Action took the position that Atsushi discloses all the elements of claims 1, 3-8, and 10, with the exception of “in the motor, a ratio of a stacking length of a magnet of a rotor to an inside diameter of a stator is 3 or more,” as recited in claims 1 and 8. The Office Action then cited Haydon as allegedly curing the deficiencies of Atsushi. The rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 3-7 are dependent, recites a motor-driven injection molding machine, which includes a member-to-be-driven, and a motor which operates

the member-to-be-driven. The motor-driven injection molding machine further includes a motion direction conversion portion disposed between the motor and the member-to-be-driven and adapted to convert to a linear motion a rotational motion of rotation generated by driving the motor. In the motor, a ratio of a stacking length of a magnet of a rotor to an inside diameter of a stator is 3 or more.

Claim 8, upon which claim 10 is dependent, recites a molding method using a motor-driven injection molding machine comprising a member-to-be-driven, a motor, and a motion direction conversion portion disposed between the motor and the member-to-be-driven. The method includes the steps of generating rotation by driving the motor, and converting a rotational motion of the rotation to a linear motion. The method further includes the step of operating the member-to-be-driven by the linear motion. In the motor, a ratio of a stacking length of a magnet of a rotor to an inside diameter of a stator is 3 or more.

As will be discussed below, the combination of Atsushi and Haydon fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above.

Atsushi generally discloses an injection device of an electromotive injection molding machine. The electromotive injection molding machine includes a weighing motor, an injection motor, a first hollow rotor shaft, a second hollow rotor shaft, a ball screw shaft integrally connected to the first hollow rotor shaft, and a ball nut threaded with the ball screw shaft. The ball nut is capable of advancing and retreating

accompanied by the rotation of the ball screw shaft. The electromotive injection molding machine further includes a spline shaft connected to a spline nut, where the spline shaft is supported in a freely rotatable manner. (see Atsushi at Abstract).

Haydon generally discloses a small electric motor which includes one or more field coils which cooperate with a long, thin cylindrical rotor having only a single pair of nonsalient rotor poles. The motor further includes a stator pole piece assembly which is in a magnetic flux relationship with the rotor and is provided with salient stator poles which each subtend an angle of at least 120 degrees from the axis of rotation of the rotor. (see Haydon at Abstract).

Applicants respectfully submit that Atsushi and Haydon, whether considered individually or in combination, fail to disclose, teach, or suggest, all of the elements of the present claims. For example, the combination of Atsushi and Haydon fails to disclose, teach, or suggest, at least, *“in the motor, a ratio of a stacking length of a magnet of a rotor to an inside diameter of a stator is 3 or more,”* as recited in independent claims 1 and 8.

The Office Action correctly concludes that Atsushi fails to disclose or suggest, *“in the motor, a ratio of a stacking length of a magnet of a rotor to an inside diameter of a stator is 3 or more,”* as recited in independent claims 1 and 8. (see Office Action at page 2). Furthermore, Applicants respectfully submit that that Haydon fails to cure the deficiencies of Atsushi. Haydon merely discloses that the rotor length-to-rotor diameter ratio should be about at least 2.5-to-1, and not more than 4-to-1, so that the rotor has the

capability of starting and stopping substantially instantaneously. (see Haydon at col. 4, lines 23-31). Thus, Haydon addresses the ratio of the length of the rotor to the diameter of the rotor, not the stator. However, independent claims 1 and 8 clearly recite that the ratio of a stacking length of a magnet of a rotor to an inside diameter of a stator is 3 or more. Thus, Haydon fails to disclose or suggest the aforementioned limitation of independent claims 1 and 8.

The Office Action further took the position that even though Haydon merely discloses that the ratio of rotor length to rotor diameter can be 4-to-1, Figure 11 discloses the claimed limitation. Specifically, the Office Action alleged that the diameter of rotor 25 was measured to be 0.90625 inches, which would result in the length of the rotor being 3.625 inches, using a 4-to-1 rotor length/rotor diameter ration. The Office Action further alleged that the inside diameter of the stator 83, 84 was measured to be 1.0625 inches, and that the resulting ratio of rotor length to inside stator diameter is about 3.411, which is greater than 3. (see Office Action at page 2).

Applicants respectfully submit that the Office Action's analysis fails to show that Haydon discloses "*in the motor, a ratio of a stacking length of a magnet of a rotor to an inside diameter of a stator is 3 or more,*" as recited in independent claims 1 and 8 for at least the following reasons. First, there is no disclosure, or suggestion, in Haydon, that Figure 11 is drawn to scale. Thus, alleged measurements of features in Figure 11 are not sufficient to establish that Haydon discloses a ratio of a stacking length of a magnet of a rotor to an inside diameter of a stator greater or equal than 3. Second, the Office Action

has failed to demonstrate which portions of Figure 11 were measured. Thus, Applicants cannot verify the accuracy of the Office Action's alleged measurements. Third, the Office Action alleged that the ratio of length of the rotor to the inside diameter of the stator is greater than 3. However, independent claims 1 and 8 do not recite that the ratio of the rotor length to the inside diameter of the stator is greater than 3. Instead, the claims recite that the ratio of the stacking length of a magnet of a rotor to the inside diameter of the stator is greater than 3.

Therefore, for at least the reasons discussed above, the combination of Atsushi and Haydon fails to disclose, teach, or suggest, all of the elements of independent claims 1 and 8. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

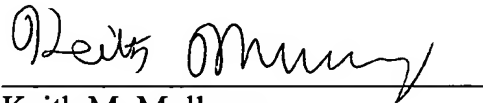
Claims 3-7 depend upon independent claim 1. Claim 10 depends upon independent claim 8. Thus, Applicants respectfully submit that claims 3-7 and 10 should be allowed for at least their dependence upon independent claims 1 and 8, respectively, and for the specific elements recited therein.

For at least the reasons discussed above, Applicants respectfully submit that the cited prior art references fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1, 3-8, and 12 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
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